

SHAPIRO, S.L.; GOL'DBERG, R.V.

First steps in the work of a hospital department for reconvalescent
dysenteric children. Vop.okh.mat.i det. 2 no.3:55-59 My-Je '57.
(MLRA 10:7)

1. Iz Detskoy gorodskoy klinicheskoy bol'nitsy imeni Rusakova
(glavnyy vrach - zaŝluzhennyy vrach RSFSR dotsent V.A.Kruzhkova)
(DYSTENTERY)

SHAPIRO, S. L.

DIPHTHERIA

"Experience in the Work of the Wards for Patients Suspected of Diphtheria", by S.L. Shapiro, L.G. Badiryan and R.A. Braynina, Voprosy Okhrany Materinstva i Detstva, No 4, July-August 1957, pp 71-75

The relatively great frequency of atypical forms of certain infectious diseases has put the diagnostic wards in hospitals into practice. Immediately after the establishment of Offices for Gastro-intestinal Diseases, the wards for patients suspected of diphtheria began to develop. Such wards, for example, which were organized in Leningrad four years ago, have prevented a large number of patients to be subjected to the unnecessary introduction of serum, and have reduced the period of their confinement to bed three times, warding off the "hyperdiagnostics" of diphtheria during an epidemic.

A group of Moscow physicians, that studied the methods of fighting diphtheria in Leningrad, has carried it into Moscow, and here during the severe diphtheritic epidemic of May-June, 1955, the diagnostic wards were established. The experience of the diagnostic ward of the

Card 1/2

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EXCERPTA MEDICA Sec.7 Vol.12/4 Pediatrics April 58

942. THE ROLE OF A PEDIATRIC HOSPITAL IN THE CONTROL OF DYSENTERY (Russian text) - Shapiro S. L., Naumova M. A. and Goldberg R. V. PEDIATRIIA 1957, 5 (73-78) Tables 1

From the I. V. Rusakov children's hospital in Moscow. Improvements in treatment in 1946 - 56 reduced the fatality rate in infants to 1/18 and in the 2-year-olds to 1/25 of the initial figure. Incidence has fallen more slowly. Two problems not yet fully solved are: early diagnosis and the development of methods to ensure rapid return to full health without relapses. To meet these problems the hospital has set up diagnostic and convalescent departments. To the diagnostic departments are admitted children with gastro-intestinal symptoms; those found with dysentery are immediately transferred to the dysentery wards. Cases are still not referred to hospital early enough, e.g. in 1956, 51% were admitted after the 3rd day and 23% after the 10th day of illness, while in children under 2 yr. delay was even more frequent. About 40% of the cases admitted were infants. Complications occurred in 25% of the cases and were more frequent the younger the patient, as well as in cases of delayed admission. The diagnosis was bacteriologically confirmed in about 33%. The percentage of cases of Sonne dysentery increased from 15% in 1955 to 30% in 1956 (the bacteriological findings in the other cases are not stated). Fatality among children admitted from the area close to the hospital was 0.6%, but was 3 times greater in children admitted from remote parts. Diagnosis is especially difficult in children admitted late and after antibiotic treatment and such cases responded poorly or not at all to antibiotics. They are best treated dietetically and non-specifically. After 2 negative stools children are transferred to the convalescent department from which they are discharged when stools have been normal for a month and 5 times bacteriologically negative. The first batch of children transferred to the convalescent department were aged 6 months to 2 yr. often with rickets, debility, exudative diathesis, after-effects of complications, or concurrent infections. At some time during their stay about 25% needed temporary isolation or return to the dysentery wards due to clinical or bacteriological relapse. 73% of those children were discharged cured within 2 months and of the remainder 6% were classified as chronic dysentery and transferred to special nurseries.

SHAPIRO, Sof'ya L'vovna

[Measles in children and their prevention] Kor' u detei 1
ee preduprezhdenie. Moskva, Medgiz, 1958. (MIRA 12:6)
(MEASLES)

SUKHAREVA, M.Ye.; RITOVA, V.V.; SHAPIRO, S.L.; ORLOVA, A.V.; DIRECHINSKAYA, Sh.
L.; SHISHLYANNIKOVA, M.A.

Features of the course of influenza in children during the pandemic
of 1957. Vop.okh.mat.i det. 3 no.2:46-52 Mr-Ap '58. (MIRA 11:3)

1. Iz infektsionnogo otdela kafedry pediatrii Instituta virusologii
AMN SSSR, Instituta pediatrii AMN SSSR i Detskoy klinicheskoy bol'nitsy
imeni I.V.Rusakova.
(INFLUENZA) (CHILDREN--DISEASES)

SHAPIRO, S. L.; DODONOVA, O. M.; YABLOKOVA, M. L.

"On the basic problems of combatting measles."

Report submitted to the 13th All-Union Congress of Hygienists,
Epidemiologist and Infectionists. 1959

DODONOVA, O.N.; SHAPIRO, S.L.

Peculiarities of the epidemiology and prevention of measles in the children's hospital. Vop.okh.mat. 1 det. 4 no.5:66-70 S-0 '59.
(MIRA 13:1)

1. Iz epidemiologicheskogo otdela (zav. - prof. Ye.M. Dmitriyeva-Ravikovich) Moskovskogo nauchno-issledovatel'skogo instituta epidemiologii, mikrobiologii i gigiyeny (dir. M.G. Kashtanova) Ministerstva zdravookhraneniya RSFSR i Detskoy gorodskoy bol'nitsy No.2 imeni Ruskova (glavnyy vrach - zasluzhennyy vrach RSFSR, dotsent V.A. Kruzhkov).
(MEASLES)

CHUMAKOV, M.P., prof., otv. red.; VOROSHILOVA, M.K., red.; DZAGUROV, S.G., red.; DROZDOV, S.G., red.; ZEYLENOK, N.A., red.; LASHKEVICH, V.A., red.; SHAPIRO, S.L., red.;

[Polio-myelitis peroral live vaccine; papers] Poliomyelitnaya peroral'naya zhivaia vaktsina; materialy. Pod red. M.P. Chumakova. Moskva, 1961. 658 p. (MIRA 15:8)

1. Akademiya meditsinskikh nauk SSSR. Moskva, Institut poliomyelita i virusnykh entsefalitov. Nauchnaya sessiya. 4th, Moscow, 1960. 2. Deystvitel'nyy chlen Akademii meditsinskikh nauk SSSR (for Chumakov).

(POLIOMYELITIS VACCINE)

DODONOVA, O.N.; SHAPIRO, S.L.

Effectiveness of the seroprevention of measles by gamma
globulin taken from a placenta in a pediatric hospital.
Trudy IEMG no.8:201-204 '61. (MIRA 17:2)

1. Moskovskiy nauchno-issledovatel'skiy institut epidemiologii,
mikrobiologii i gigiyeny (for Dodonova). 2. Moskovskaya detskaya
bol'nitsa imeni Rusakova (for Shapiro).

SHAPIRO, S.L.; GOL'DBERG, R.V. (Moskva)

Working experience in a ward for convalescents following acute
dysentery. Sov.zdrav. 20 no.5:29-32 '61. (MIRA 14:5)

1. Iz detskoy gorodskoy klinicheskoy bol'nitsy imeni M.V.Rusakova
(glavnyy vrach - zasluzhennyy vrach RSFSR dotsent V.A. Kruzhhkov).
(DYSENTERY)

AGABABOVA-SKOBEL'VA, V.V., kand. med. nauk; DOBROKHOTOVA, A.I., prof. [deceased]; ZHUKOVSKIY, M.A., kand. med. nauk; LEBEDEV, D.D., zasl. deyatel' nauki prof.; MARTINSON, Kh.S., kand. med. nauk; MOLCHANOV, V.I., prof.; NOSOV, S.D., prof.; SOBOLEVA, V.D., doktor med. nauk; SOLOV'YEV, V.D., prof.; SUKHAREVA, M.Ye., prof.; SHAPIRO, S.L., kand. med. nauk; SHERMAN, R.Z., doktor med. nauk; SHIRVINDT, B.G., prof.; DOMBROVSKAYA, Yu.F., otv. red.; POTAPOVA, I.N., red.; BEL'CHIKOVA, Yu.S., tekhn. red.

[Multivolume manual on pediatrics] Mnogotomnoe rukovodstvo po pediatrii. Moskva, Medgiz. Vol.5. [Infectious diseases in children; aerial and droplet infections] Infektsionnye bolezni v detskom vozraste; vozdushno-kapel'nye infektsii. Red. toma S.D.Nosov. 1963. 547 p. (MIRA 16:6)

1. Chlen-korrespondent Akademii meditsinskikh nauk SSSR (for Skobeleva, Solov'yev). 2. Deystvitel'nyy chlen Akademii meditsinskikh nauk SSSR (for Dombrovskaya).

(PEDIATRICS) (COMMUNICABLE DISEASES)

MANANNIKOVA, Nadezhda Vasil'yevna; BULYGINA, Yelizaveta Aleksandrovna;
ROMANOVSKAYA, Sof'ya Yul'yevna; SHESTAKOVA, Natal'ya Petrovna;
SHAPIRO, Sof'ya L'vovna; SHISHLYANNIKOVA, Mariya Abramovna;
NOVOSELOVA, Raisa Semenovna; POPOVA, G.F., red.; YUKHNOVSKAYA,
S.I., red.; KOKIN, N.M., tekhn. red.

[Course of lectures for gravidas and mothers] Kurs lektsii
dlia beremennykh i materei. 7 lektsii. 5 izd. Moskva, Medgiz,
1963. 238 p. (MIRA 16:7)
(PRENATAL CARE) (WOMEN--HEALTH AND HYGIENE)
(INFANTS--CARE AND HYGIENE)

SHALIKO, G.I.

Rational use of hospital beds. Vop. kh. mat. i dok. 8 no.7:
78-81 J1 '63. (MIR 17:2)

1. iz Moskovskoy detskoy gorodskoy klinicheskoy bol'nitsy imeni
I.V. Rusakova (glavnyy vrach M.M. Kraseva).

SHABRIN, M.G.; SHAPIRO, S.N.

Treatment of trichomonal colpitis with preparations of Laminaria.
Akush.i gin. no.2:81-83 Mr-Ap '54. (MIRA 7:6)

1. Tikhookeanskiy nauchno-issledovatel'skiy institut rybnogo
khozyaystva i okeanografii. (Vagina--Diseases) (Algae)

KOGAN, I.A.; AGEYEV, G.V.; SHAPIRO, S.N.

Modifications in gastric secretion in connection with gynecological diseases. Akush. i gign. 33 no.2:49-52 Mr-Apr '56. (MLBA 9:7)

(GYNECOLOGICAL DISEASES, compl.

gastric secretion modification)

(GASTRIC JUICE, physiol.

secretion, eff. of gyn. dis. on)

SHAPIRO, S. P.

Shapiro, S. P. -- "The Glands of the Mucous Membrane of the Nasal Region in Man and Certain Animals." Khar'kov Medical Inst. Khar'kov, 1955. (Dissertation For the Degree of Candidate in Medical Sciences).

So: Knizhnaya Letopis', No. 11, 1956, pp 103-111.

1ST AND 2ND ORDERS										3RD AND 4TH ORDERS									
PROCESSES AND PROPERTIES INDEX																			
AM SHAPIRO (Mme S. M.). Оригинальный случай мозаики у <i>Lappa sp.</i> [A curious case of mosaic in <i>Lappa sp.</i>]—ex Вирусные болезни растений в Крыму и на Украине [Virus diseases of plants in the Crimea and the Ukraine], pp. 109-113, 4 figs., Госизд. Печат. Крым [State Publ. Office for the Crimea], Simferopol, 1934. [German summary.] A brief morphological account is given of a disease of a species of burdock (<i>Lappa</i>) [<i>Arctium</i>] which has been observed by the author since 1925 in Kharkoff [Ukraine]. In mild cases the disease is charac- terized by a mosaic pattern on the leaves, strongly suggestive of a virus disease, and this is supported by the anatomical changes caused in the leaves; in cases of more severe infection, however, the leaf lamina is considerably reduced, until occasionally it may assume all the shapes described for the fern-leaf disease of tomato [R.A.M., xiii, p. 809]. The disease is believed to be the first record in weeds of such malformation of the leaves, presumably due to a virus agency, and is interesting because of its possible relationship with the tomato disease.																			
ASAC-5LA METALLURGICAL LITERATURE CLASSIFICATION										VIGNI DOMINUS									
1ST AND 2ND ORDERS										3RD AND 4TH ORDERS									

Shapiro, S.M.
KRASOVITSKAYA, S.Ye.; SYRKINA, P.Ye.; SCHNITZER, I.S.; SHAPIRO, S.M.

Anoxia syndrome in hypertonia. Ter, arkh. 22 no.2:8-13 Mr-Apr '50.
(GML 19:3)

1. Of the Department for the Therapy of Internal Diseases (Head -- Prof. M.S.Vovsi, Major General Medical Corps, Active Member of the Academy of Medical Sciences) and of the Department of Pathological Physiology (Head -- Prof. A.M.Charnyy), both of the Central Institute for the Advanced Training of Physicians.

SHAPIRO, S. M., ZHELEZNIY, G. B.,

"Underground Waters of the Granite Massifs of Northern Pribalkhash'",
Vestn. AN Kazakh SSR, No 7, 75-82, 1953.

In Northern Pribalkhash' atmospheric precipitation serves only in small degree, because of the intensive evaporation, as a source of supply for the underground waters (in the anticlinal structures, tectonic fractures, parts with developed karsts, etc.). Of hydrogeological interest are the ancient sedimentary, metamorphic, volcanic, and intrusive rocks which are widely distributed everywhere in Central Kazakhstan and which are water-bearing thanks to their creviced nature. The granite massifs differ by their increased water-bearing quality, which is due to their strong features. (RZhGeol, No 5, 1954).
SO: Sum. No. 443, 5 Apr. 55

SHAPIRO, S.M., kandidat geologo-mineralogicheskikh nauk.

Some peculiarities of the conditions of the source and cycle of
underground waters in regions with small-hill relief. Vest. AN
Kazakh. SSR 11 no.6:83-86 Je '54. (MLRA 7:8)
(Kazakhstan--Water, Underground) (Water, Underground--Ka-
zakhstan)

SHAPIRO, S.M., kandidat geologo-mineralogicheskikh nauk

Possible utilization of underground waters of the lower Mura
Valley as water supply for state grain farms. Vest. AN Kazakh.
SSR 11 no. 8:50-54 Ag'55. (MLRA 9:1)
(Mura Valley--Water, Underground)

SHAPIRO, S.M., inzhener.

Problem of inaccurate records and control of production in
some enterprises of the oil and fat industry. Masl.-zhir.prom.
19 no.5:25-26 '54. (MIRA 7:9)

1. Glavraszhirmaslo.
(Oils and fats)

SHAPRO, N. Ya.

Peculiarities of distribution of fresh subterranean waters
in virgin land of Southeastern part of Akmolinsk region.
S. M. Shapiro and N. Ya. Yukupova. *Vestnik Akad. Nauk
Kazakh. S.S.R.* 12, No. 6, 53-61 (1956) (in Russian).
Plans, diagrams, and tabulated data are given for the dis-
tribution of subterranean waters and their dissolved con-
tents as found in the southeastern part of the Akmolinsk
region of U.S.S.R. G. M. Kosolapoff

SHAPIRO, S.M.

Ground waters of small river valleys in the eastern region of central
Kazakhstan. Izv.AN Kazakh.SSR Ser.geol.no.25:79-89 '56. (MLRA 10:2)
(Kazakhstan--Water, Underground)

BOCHKAREVA, V.A.; SHAPIRO, S.M.

Conditions governing the formation of the chemical composition
of underground waters in Upper Tertiary sediments of northern
Kazakhstan. Izv. AN Kazakh. SSR. Ser. geol. no. 1:52-57 '62.

(MIRA 15:5)

(Kazakhstan--Water, Underground--Composition)

SHAPIRO, S.M.

Fissure waters in the granitoids in the northwestern Lake
Balkhash region. Izv. AN Kazakh. SSR, Ser. geol. no.2:96-103 '61.
(MIRA 14:7)

(Balkhash Lake region--Water, Underground)

SHAPIRO, S.M., kand.geol.-mineral.nauk; ISMAKOV, K.I.

Formation of underground waters in the lower part of the Tokrau Valley. Vest. AN Kazakh. SSR 17 no. 2:44-51 F '61.

(MIRA 14:2)

(Tokrau Valley--Water, Underground)

LOCHKAEV, V.I., kand. geol.-miner. nauk; NIKITINA, L.G., kand. geol.-miner. nauk; SHAPIRO, S.M., kand. geol.-miner. nauk; EYDINOVA, N.M., st. inzh.; GOLDBORODKO, G.L., inzh.; PERLIK, G.P., inzh.; BANDALETOV, S.M., kand. geol.-miner. nauk; VLADIMIROV, N.M., kand. geol.-miner. nauk; SADYKOV, A.M., kand. geol.-miner. nauk; MALYSHEV, Ye.G., ml. nauchn. sotr.; BERKALIYEV, N.A., st. inzh.; EYDINOV, Yu.I., st. inzh.; MUKHAMEDZHANOV, S.M., kand. geol.-miner. nauk; ISABAYEV, T.T., st. inzh.; MOTOV, Yu.A., inzh.; KOLOTILIN, N.P., kand. geol.-miner. nauk; LAPIDUS, Zh.D., inzh.; SHOYMANOVA, M.M., inzh.; YEREMCHIK, G.S., inzh.; RABOTIN, MARNI A.V., kand. miner. nauk [deceased]; MIKHAYLOV, B.P., st. inzh.; SATPAYEV, K.I., akademik, glav. red. [deceased]; MEDOYEV, G.TS., otv. red.; DMITROVSKIY, V.I., red.; SEMENOV, I.S., red.; BRAILOVSKAYA, M.Ya., red.; KOROLEVA, N.N., red.

[Irtys-Karaganda Canal; engineering geological conditions]
Kanal Irtys - Karaganda; inzhenerno-geologicheskie usloviya.
Alma-Ata, Nauka, 1965. 169 p. (MIRA 18:5)

(Continued on next card)

SHAPIRO, S.M.

Formation of the underground waters of Paleozoic volcanic
sedimentary rocks in the southeastern part of central Kazakh-
stan. Trudy Inst. geol. nauk AN Kazakh.SSR no.14:49-63 '65.
(MIRA 19:1)

SHAPIRO, S.P. (Khar'kov, ul. Anri Barbyusa, d.7, kv.56)

Glands of the nasal mucosa in humans and in certain animals [with
summary in English]. Arkh.anat.gist. i embr. 34 no.4:64-69 J1-Ag '57.
(MKRA 10:11)

1. Iz kafedry anatomii Khar'kovskogo meditsinskogo stomatolobiche-
skogo instituta (nauchnyy rukovoditel' - prof. R.D.Sinel'nikov)
(NASAL CAVITY, anatomy and histology,
glands in nasal mucosa (Rus))

SHAPIRO, S.S.

27

Determination of sulfates by the drop method. E. I. NASTA-
SKINA AND S. S. SHAPIRO. Elek. Standart, 27 [9] 65-66 (1956).--

Sum The method involves titration of a solution containing sulfates
with barium chloride in the presence of the indicator disodium
rhodizonate. The analysis requires 15 to 20 min. B.Z.K.

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BAMDAS, A.M.; KATKOV, R.N.; SHAPIRO, S.V.

Contactless cascade generator. Izv. vys. ucheb. zav.; elektromekh.
1 no.5:50-54 '58. (MIRA 11:8)
(Electric generators)

SOV/110-59-9-3/22

AUTHORS: Bamdas, A.M. (Dr.Tech.Sci.), Somov, V.A. (Cand.Tech.Sci.)
and Shapiro, S.V. (Engineer)

TITLE: New High-output a.c. Starting Stabilisers

PERIODICAL: Vestnik elektropromyshlennosti, 1959, Nr 9, pp 8-12 (USSR)

ABSTRACT: The Research Laboratory of the Electrical Machines
Chair of the Gor'kiy Polytechnic Institute has made
prototypes of a.c. starting stabilisers with outputs of
2.5 and 10 kW. These starting stabilisers are intended
for use in conjunction with the filaments of large radio
valves which are of much lower resistance when cold than
when hot. The device consists of a transformer
controlled by a pre-magnetised shunt. The arrangement
of the core and coils of this transformer is illustrated
diagrammatically in Fig 1. The primary winding is wound
on the two main inner limbs, the d.c. control winding
being on the narrow outer magnetic shunt limbs whilst
the secondary winding is wound round both main and shunt
limbs. The hot resistance of valve filaments is nine
times greater than the cold resistance, so that the
secondary is practically short-circuited on starting and
the current in it is controlled by automatic regulation

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30V/110-59-9-3/22

New High-output a.c. Starting Stabilisers

of the d.c. pre-magnetisation of the shunt limbs. A full schematic diagram of a 10-kW starting stabiliser is shown in Fig 2; it consists of the transformer already described, with suitable control arrangements. The latter comprise a measuring device, an electronic amplifier, a magnetic amplifier and a starting device. These are described in turn and their functions briefly explained. It is possible for starters of this kind to oscillate, so stability is considered and formula (3) is derived for the conditions of stability of the system. The design points that must be watched to ensure stability are briefly mentioned. Test results and characteristics of the arrangement are then given; the performance curves of Fig 3 relate to a 10-kW device. It will be seen that the secondary voltage differs from the rated value by only $\pm 0.5\%$ when the primary voltage alters by $\pm 10\%$. The efficiency of the device is 89% and the power factor about 0.7. Starting characteristics of the 10-kW stabiliser are given in Fig 4 and indicate that during the starting period the secondary current does not exceed the permitted value of 750 amps. The tests also confirmed that the temperature rise of the equipment was

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New High-output a.c. Starting Stabilisers

not excessive. Dimensions and weights are stated and a photograph of the 10-kW stabiliser is given in Fig 5. There are 5 figures, and 4 Soviet references.

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SHAPIRO, S. V., CAND TECH SCI, ^{Contemporary} ~~"MODERN"~~ STATISTICAL ^{design.} ~~COMPU~~
ELECTROMAGNETIC FREQUENCY CONVERTERS AND THEIR
~~LATION.~~ GOR'KIY, 1960. (MIN OF HIGHER AND SEC SPEC
ED RSFSR. TOMSK ORDER OF LABOR RED BANNER POLYTECH INST
IM S. M. KIROV). (KL, 2-61, 213).

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9.3260

AUTHORS:

82919
S/144/60/000/006/004/004
E194/E135
Bamdas, A.M., (Doctor of Technical Sciences, Professor),
and Shapiro, S.V., (Assistant)

TITLE:

Bridge Type Static Frequency Doublers²⁵

PERIODICAL:

Izvestiya vysshikh uchebnykh zavedeniy,
Elektromekhanika, 1960, No 6, pp 119-122

TEXT:

This article describes two new types of static frequency doublers that have been developed in the Electrical Machines Laboratory of the Gor'kiy Polytechnical Institute. The first is a capacitor bridge type frequency doubler, the circuit of which is shown in Fig 2. The load is connected to the diagonals of a four arm bridge consisting of two capacitors and two chokes with auxiliary d.c. magnetisation. With this circuit arrangement fundamental frequency and odd harmonic voltages do not appear across the secondary terminals but double frequency and other even harmonics appear. The best value of capacitance C_1 for the bridge arms may be calculated from:

$$C_1 = (0.065 \pm 0.08) \frac{I_2}{f_1 U_2} \cdot 10^6 \mu F, \quad (1)$$

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Bridge Type Static Frequency Doublers

where I_2 is the nominal current in the load circuit, U_2 is the nominal output voltage, f_1 is the frequency of the supply network. The choke current

$$I = (0.6 \div 0.7) I_2 \quad (2)$$

The ampere turns of the auxiliary magnetization will equal

$$I_d w_d = (0.5 \div 0.6) I_2 w, \quad (3)$$

where I_d is the magnetization current, w and w_d are respectively the ampere turns in the load winding of the choke and the pre-magnetization winding. If no output transformer is used the output voltage of the frequency doubler is about a third of the input voltage. Provided no output transformer is required this device employs 10 - 20% less copper than a normal frequency doubler, the capacitors are smaller than those required with normal frequency doublers to provide power factor correction and series compensation. The second frequency doubler described is of the inductance bridge type and a schematic circuit diagram is

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Bridge Type Static Frequency Doublers

given in Fig 3. It consists of four similar saturating chokes with d.c. polarisation. The chokes in opposite arms of the bridge are saturated simultaneously and those of adjacent arms are alternately saturated every half cycle. This causes double frequency voltage to appear across the bridge diagonal to which the load is connected. A shunt capacitor is connected across the primary terminals for power factor correction and a series capacitor in the load circuit to maintain the voltage on load. In the absence of an output transformer the output voltage is about two thirds the supply voltage. The relationships between the primary current I_1 and the secondary current I_2 and also the magnetization current I_d of the frequency doubler can be determined from:

$$I_1 = (1.2 \div 1.4)I_2 = (1.2 \div 1.3)I_d, \quad (4)$$

whereby the magnitude of the series capacitance

$$C_2 = (0.08 \div 0.12) \frac{I_2}{f_1 U_2} \cdot 10^6 \text{ p F.} \quad (5)$$

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Bridge Type Static Frequency Doublers

It is calculated that a frequency doubler of this type employs 20 - 30% less copper than a normal frequency doubler. Frequency doublers of 1.5 kVA output were built in the laboratory, and Fig 4 shows a photograph of the core of a capacitor frequency doubler. It will be seen from the curve plotted in Fig 5 for a capacitor type frequency doubler that as the load current is increased to the maximum the output voltage drops by only 20%. This curve was taken with a resistive load and when the load was partially inductive the voltage drop was still less. The efficiency of the capacitor frequency doubler was about 80% and its power factor 0.8 - 0.9. An oscillogram of the output voltage is given in Fig 6 and it will be seen that it is distorted as in normal frequency doublers. Similar tests made with an inductance type frequency doubler gave a full load efficiency of 82%, power factor of 0.6, and voltage drop at full load of 19%. The inductance type should only be used in low power installations where power factor correction is not required. Design of the circuit components of the two types of frequency doubler will be the subject of separate publications.

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S/144/60/000/006/004/004
E194/E135

Bridge Type Static Frequency Doublers

There are 6 figures and 5 references: 4 Soviet and 1 English.

ASSOCIATION: Kafedra elektricheskikh mashin i apparatov,
Gor'kovskiy politekhnicheskii institut
(Chair of Electric Machines and Apparatus,
Gor'kiy Polytechnical Institute)

SUBMITTED: February 20, 1960

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S/194/62/000/002/013/096
D230/D301

7,3240

AUTHORS: Bamdas, A. M. and Shapiro, S. V.

TITLE: Rational construction of statistical electro-magnetic frequency multipliers and their design elements

PERIODICAL: Referativnyy zhurnal, Avtomatika i radioelektronika, no. 2, 1962, abstract 2-2-13ch (Tr. Gor'kovsk. politekhn. in-ta, 1960, 16, no. 5, 44-60)

TEXT: Results are given of the theoretical and experimental comparison of various systems of the statistical frequency multipliers made at the Gor'kiy Polytechnic Institute. A short description of certain types of frequency doublers and triplers is given. Optimum relations for the statistical frequency multipliers, at fixed current densities, are deduced. On the basis of these relations formulae are obtained for the design of triplers. Design examples for the statistical frequency doublers and triplers at powers of 1 to 1.5 kW are given. 11 figures. 6 references. / Abstracter's note: Complete translation. /

Card 1/1

SHAPIRO, S.V., inzh.

Analytical calculation of the external characteristic of a
frequency tripler with transverse capacitive compensation.
Trudy GPI 16 no.5:61-66 '60. (MIRA 16:4)

(Frequency multipliers)

ATTACHED

3/103/60/021/06/15/016
B012/B034

Bardas, A. M.; Kulnlich, V. A.; Tsoov, V. A.
Bychrov, V. A.; Shapiro, S. V.; Shaldit, A. O.
Gu Shen-Gu (cor'ky)

TITLE: New Electromagnetic Control Organs for Automatic Control Systems

PERIODICAL:
Aviznailika i telemekhanika, 1960, Vol. 21, No. 6,
pp. 907 - 917

TEXT. New transformers were designed at the Gorkhovskiy politehnicheskiy institut by A. A. Zhdanov (Gorkhskiy Polytechnic Institute, A. A. Zhdanovskiy) for the construction of control organs for automatic control systems without switching contacts, solenoid relays, or electronic elements (Ref. 1, footnote on p. 90). They are controlled by changing the parameters of chains consisting of 0.5-100 resistors and 16-200 capacitors. The number of plants in the GSM. A single-phase transformer of this type of 5000 kv is being developed at present. The various systems of such transformers are described in Ref. 2.

8

New Electromagnetic Control Organs for Automatic Control Systems

described here. The data refer to investigations carried out in 1967 by the author and yet unpublished. The paper of Ref. 2 reported on previous investigations.

Firstly, the authors describe two principal constructions of single-phase transformers of this type one for controllers with effective control, the other for control systems of various stabilizers. These constructions are described in Figs. 2 and 3 respectively. Some of their parameters are characterized by means of the circuit diagrams and abrupt cutoff. As second electrical drive, two transformers, single-phase transformers with feedback electrically driven, are described. The use of an external feedback (Fig. 5) reduces the inductance of the control element without reducing the relative reduction of the output weight of the transformer by about 15%. The parameters of a transformer of this type are indicated. The authors give a mathematical analysis of the operation of a transformer of the new type. It is shown that such an ideal transformer, like an ideal magnetic amplifier, is an approximate model of the first order with a time constant according to formula (6). Here, the author describes their own transformer with three inductive phases. Transformer of the type mentioned (Fig. 8), it is used for

New Electromagnetic Control Organ for
Automatic Control System

the continuous control of a three-phase valve with symmetric loads of the converter. The experiments showed that the characteristics of the group of converters are satisfactory. Finally, the authors describe static control of the number of phases with a transformer of the new type mentioned (Fig. 3). The analysis shows that the simplification of the symmetry of a multiphase system requires an adjustment of the parameters of the control system, i.e., the converter. The curves in Figs. 10 show that relative values the inductance and capacitance of the converter branches (on conversion of a single-phase current into a three-phase current) must have at a change of the relative value of the symmetrical power and at different power coefficients. The parameters are selected automatically (see, for example, p. 916) if the control organ has three adjustable. Such algorithms may be used in corresponding automatic controllers of the type described. It is shown in corresponding calculations of the circuits shown in Figs. 9, there are 11 figures and 8 Soviet references.

Card 3/3

25

BADMAS, Aleksandr Markovich; KULINICH, Valentin Aleksandrovich; SHA-
FIRO, Semen Vol'fovich; KALASHNIKOV, S.I., red.; LARIONOV, G.Ye.,
tekhn. red.

[Electromagnetic static frequency and phase number converter] Sta-
tisticheskie elektromagnitnye preobrazovateli chastoty i chisla faz.
Moskva, Gos.energ.izd-vo, 1961. 207 p. (MIRA 14:12)
(Frequency changers) (Phase converters)

2h230

S/143/61/000/007/001/004

D053/D113

11/15/0 (1020, 1331, 1462)

AUTHORS: Bamdas, A.M., Doctor of Technical Sciences, Professor;
Blinov, I.V., and Shapiro, S.V., Engineers

TITLE: Static electromagnetic frequency multipliers with 4, 6, 8,
and 9 multiplication factors

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy. Energetika, ⁴no. 7,
1961, 35-44 ₁

TEXT: The subject of this article was discussed at the All-Union Conference on Contactless Magnetic Automation Elements, which was held in Minsk on February 20, 1961. The research program on static electromagnetic frequency multipliers was conducted by the research laboratory of the electrical machinery and apparatus department at the Gor'kovskiy politekhnicheskii institut im. A.A. Zhdanova (Gor'kiy Polytechnic Institute im. A.A. Zhdanov). The program was limited to multipliers changing the 50-cps single and three-phase industrial current into 200, 300, 400, and 450-cps single and three-phase current. A number of such multipliers with cores made from $\text{E}310$ (E310) steel were built and tested at the institute. The output voltage was controlled by varying the magnetizing current. Figure 5 shows typical output characteristics. Card 1/8

Static electromagnetic frequency...

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S/143/61/000/007/001/004
D053/D113

... of a sextupler (Fig. 5a) and a nonupler (Fig. 5b). The results obtained revealed that frequency multiplication by more than 4 times can be most economically obtained by means of cascade multipliers, using well-known frequency doublers and triplers (Ref. 1 through Ref. 3) and a little known single-stage quadrupler. The quadrupler (Fig. 1a) consists of two magnetic circuits; each of them composed of two identical shell or rod type cores with a secondary winding W_2 and a d-c magnetizing winding W_d . The primary windings $W_{1(1)}$ and $W_{1(2)}$ are wound around each pair of the cores and interconnected to form a T-circuit. Since all the cores are magnetized with d.c. flowing through the W_d windings, a frequency equal to the quadruple of the basic frequency appears at the multiplier output. The active cross-sectional area of the main core is given by the formula:

$$Q_c = (3.8 \div 5.0) \cdot \sqrt{\frac{P_2}{kf}} \quad \left[\text{cm}^2 \right]; \quad (1)$$

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D053/D113

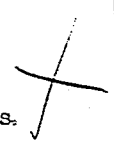
Static electromagnetic frequency...

where P_2 is the quadrupler output in VA; f is the frequency of the supply network; and k is a factor equal to 1 for a three-leg core and equal to 2 for a pi-shaped core. The core height is

$$h = (2.7 \div 3.3) \cdot \sqrt{kQ_c} \quad [\text{cm}]. \quad (2)$$

The number of turns in the primary winding of the first pair of cores is

$$W_{1(1)} = 0.1 \cdot \frac{U_1 \cdot 10^8}{fB_{1m}Q_c}; \quad (3)$$

where U_1 is the line voltage of the supply network; and B_{1m} is the amplitude of the basic harmonic of the magnetic induction in the core. For E510 sheet steel, 0.35 mm thick, the value of B_{1m} is 17,000 ÷ 18,000 gauss. 
Cont 3/8

24230

S/143/61/000/007/001/004
D053/D113

Static electromagnetic frequency...

The number of turns in the primary winding of the second pair of cores is

$$W_{1(2)} = 1.15W_{1(1)} \quad (4)$$

The number of turns in the secondary windings:

$$W_2 = (1.0 \div 1.3) \frac{U_2}{U_1} W_1 \quad (5)$$

The number of turns in the magnetizing winding is

$$W_d = (1.0 \div 1.3) W_2 \cdot \frac{I_2}{I_d} ; \quad (6)$$

where I_2 is the rated current in the secondary winding. The rated currents in the primary windings are

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S/143/61/000/007/001/004
D053/D113

Static electromagnetic frequency...

$$I_{1(1)} = (1.5 \div 1.8) I_2 \frac{W_2}{W_{1(1)}}, \text{ and} \quad (7)$$

$$I_{1(2)} = (1.5 \div 1.8) I_2 \frac{W_2}{W_{1(2)}}.$$

For preliminary calculations, the value of the capacitor C_1 can be taken as

$$C_1 = (0.04 \div 0.06) \frac{I_2}{f U_2} \cdot 10^6 / \mu F. \quad (8)$$

The remaining quadrupler parameters are calculated the same way as for small-power transformers (Ref. 12). Schematics of single-stage and cascade frequency multipliers are given. There are 10 figures and 12 Soviet-bloc references.

Card 5/8

Static electromagnetic frequency...

ASSOCIATION: Gor'kovskiy politekhnicheskii institut imeni A.A. Zhdanova
(Gor'kiy Polytechnic Institute im. A.A. Zhdanov)

SUBMITTED: February 20, 1961

Page 6/8

2130
S. 113/61/001 117, 011 011
D053/D113

Static electromagnetic frequency...

24230

S/143/61/000/007/001/004
D053/D113

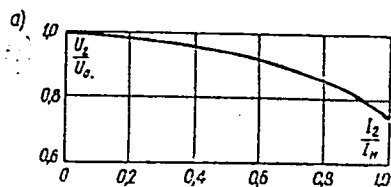


Fig. 5a
Output characteristic of the sextupler

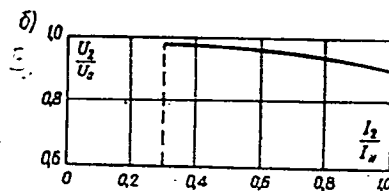


Fig. 5b
Output characteristic of the nonupler

Card 8/8

BAMDAS, Aleksandr Markovich, doktor tekhn.nauk, prof.;
SHAPIRO, Semen Valentinovich, assistant

Bridge-type static frequency doublers. Izv. vys. ucheb. zav.;
elektromekh. 3 no.6:119-122 '60. (MIRA 15:5)

1. Zaveduyushchiy kafedroy elektricheskikh mashin i apparator
Gor'kovskogo politekhnicheskogo instituta (for Bamdaz).
2. Kafedra elektricheskikh mashin i apparatov Gor'kovskogo
politekhnicheskogo instituta (for Shapiro).
(Frequency changers)

BAMDAS, Aleksandr Markovich, doktor tekhn.nauk, prof.; SHAPIRO, Semen
Valentinovich, assistant

Three-phase two-element static frequency triplers. Izv. vys.
ucheb. zav.; elektromekh. 3 no.9:80-87 '60. (MIRA 15:5)

1. Zaveduyushchiy kafedroy elektricheskikh mashin i apparatov
Gor'kovskogo politekhnicheskogo instituta (for Bamdass).
2. Kafedra elektricheskikh mashin i apparatov Gor'kovskogo
politekhnicheskogo instituta (for Shapiro).
(Frequency changers) (Electric transformers)

BAMDAS, A.M., doktor tekhn.nauk; SHAPIRO, S.V., inzh.

Single-phase and three-phase voltage stabilizers with magnetized
autotransformers. Vest. elektroprom. 32 no.9:45-49 S '61.

(MIRA 14:8)

(Voltage regulators) (Electric transformers)

SHAPIRO, Semen Valentinovich, kand.tekhn.nauk, dotsent

Steady-state and transient processes in a transformer with an
excitation shunt. Izv.vys.ucheb.zav.; elektromekh. 5 no.4:392-
401 '62. (MIRA 15:5)

1. Kafedra elektricheskikh mashin Gor'kovskogo politekhnicheskogo
instituta.

(Electric transformers)

BANDAS, A.M., doktor tekhn. nauk; SHAPIRO, S.V., kand. tekhn. nauk;
GETMANENKO, O.D., inzh.

Calculation and determination of the optimal designs of bias
controlled transformers and autotransformers. Trudy GPI 18
no.1:5-71 '62. (MIRA 18:7)

BAMDAS, A.M., doktor tekhn.nauk; SHAPIRO, S.V., inzh.

Three-phase static electromagnetic frequency quadrupler. Vest.
elektroprom. 33 no.1:33-34 Ja '62. (MIRA 14:12)
(Frequency multipliers)

L 43918-65 EEC(b)-2/EED-2/EWA(h)/EWT(1) Pj-4/Feb IJP(c)

ACCESSION NR: AR4046562

S/0271/64/000/008/A011/A011

SOURCE: Ref. zh. Avtomat., telemekhn. i vychisl. tekhn. Svodnyy tom, Abs. 8A85

AUTHOR: Bamdas, A. M.; Shapiro, S. V.; Zakharov, N. V.; Makhin, Yu. I.

TITLE: Static ferromagnetic frequency multipliers self-magnetized by an intermediate harmonic of the flux

CITED SOURCE: Tr. Gor'kovsk. politekhn. in-ta, v. 19, no. 3, 1963, 33-42

TOPIC TAGS: frequency multiplier, frequency quadrupler / SPChP-4 quadrupler

TRANSLATION: An SPChP-4 ferromagnetic frequency quadrupler is described in which the second harmonic of the flux is used for self-magnetization. The quadrupler comprises two units with two identical conventional type cores in each. T-connected primaries of each unit are supplied by three-phase power. Each unit has three secondaries, the like windings being connected in opposition. The secondaries of the both units are connected in series. The magnetization winding is d-c supplied. In the output-winding and the magnetization-winding circuits, the fundamental and the second emf harmonics cancel out each other while the fourth harmonics are summed up. As a result, a voltage of the frequency four times as high as the supply frequency is generated at the SPChP-4 output. The fundamental-frequency

Card 1/2

L 43918-65

ACCESSION NR: AR4046562

energy is converted into quadruple-frequency energy by two ways: (1) directly and (2) via an internal cascade in which the frequency is first doubled and then quadrupled. Single-phase SPChP-4 have been developed for ratings of 0.5, 1.2, 1.6, 1.9 kva with an efficiency of about 80%. External characteristics of various SPChP-4 quadruplers are analyzed. Methods are set forth for designing a single-phase self-cooled multiplier intended for continuous operation. The design formulas are valid up to 10 kva and 100 cps (primary frequency). Self-magnetized 6, 8, and 9-times multipliers are briefly considered. A principal distinction of the above multipliers lies in the fact that, in addition to the direct generation of a higher harmonic, a stepwise frequency multiplication — first into an intermediate and then into the output frequency — takes place. Six illustrations. Bibliography: 7 titles.

SUB CODE: EC

ENCL: 00

Card 2/2 m/b

BAMDAS, A.M., doktor tekhn.nauk; SHAPIRO, S.V., kand.tekhn.nauk; BLINOV, I.V.,
inzh.; ROGINSKAYA, I.E., inzh.

Large static ferromagnetic frequency tripler for an electric
welding systems. Trudy GPI 19 no.3:43-49 '63.

(MIRA 17:10)

SHAPIRO, S.V.; DAVYDOVA, L.N.

Ferromagnetic 50/25 cycle frequency divider. Trudy GPI 19 no.3:87-88
'63. (MIRA 17:10)

BAMDAS, A.M., doktor tekhn. nauk; SHAPIRO, S.V., kand. tekhn. nauk;
ZAKHAROV, N.V., inzh.; MAKHIN, Yu.I., inzh.

Two-stage ferromagnetic frequency multipliers. Vest. elektro-
prom. 34 no.7:67-70 J1 '63. (MIRA 16:8)

L 44294-65 EPA(s)-2/EWA(h)/EWT(1) Pt-7/Peb IJP(c) GG/GS

ACCESSION NR: AT5011603

UR/0000/64/000/000/0155/0163

AUTHOR: Bandas, A.M.; Shapiro, S.V.

26
B+1

TITLE: Some ferromagnetic frequency-multiplier designs

SOURCE: Vsesoyuznoye soveshchaniye po magnitnym elementam avtomatiki, telemekhaniki, izmeritel'noy i vychislitel'noy tekhniki. Lvov, 1962. Magnitnyye elementy avtomatiki, telemekhniki, izmeritel'noy i vychislitel'noy tekhniki (Magnetic elements of automatic control, remote control, measurement and computer engineering); trudy soveshchaniya. Kiev, Naukova dumka, 1964, 155-163

TOPIC TAGS: ferromagnetic frequency multiplier, static frequency tripler, static frequency quadrupler, static frequency octupler, three phase frequency multiplier

ABSTRACT: Some little-known designs of static ferromagnetic frequency converters (tripler, quadrupler, and octupler) have been built and studied at the research laboratory of the Kafedra elektricheskikh mashin (Department of Electrical Machines) of the Gor'kovskiy politekhnicheskiiy institut im. A. A. Zhdanov [Gor'kiy Polytechnic Institute] during the period 1961-1962. They were designed for the multiplication of the standard 50 cps frequency (to 150 and 400 cps) and were earmarked to serve as the power supply

Card 1/2

L 44294-65

ACCESSION NR: AT5011603

for various elements of modern automatic devices - magnetic amplifiers, selsyns, and others. The present article describes: 1. a frequency tripler controlled by the DC magnetization current; 2. a three-phase single-stage quadrupler; and 3. a three-phase frequency octupler. These multipliers may be used as multiplier-stabilizers, and may operate as converters of the primary 400-2000 cps frequency. All magnetic circuits are made of E310-0-35 steel and all multipliers contain capacitors for the longitudinal compensation which, connected to the output of the multiplier, augment the rigidity of the external characteristics (see, A.M. Bandas, V.A. Kulinich, S.V. Shapiro, Stitcheskiye elektromagnitnyye preobrazovateli chastoty i chisla faz, Gosenergoizdat, M. 1961) and increase the efficiency. The paper also presents the calculational elements for the design of the above-mentioned tripler and quadrupler. Orig. art. has: 19 formulas and 7 figures.

ASSOCIATION: none

SUBMITTED: 29Sep64

ENCL: 00

SUB CODE: EC

NO REF SOV: 005

OTHER: 000

Card 2/2 *ms*

BANDAS, Aleksandr Markovich; SHAPIRO, Semen Vol'fovich;
KOTLICHENKOV, M.A., red.

[Electric transformers with bias control] Transformatory,
reguliruemye podmagnichivaniem. Moskva, Energiia, 1965.
158 p. (Biblioteka po avtomatike, no.147) (MIRA 18:10)

L 55347-65 EWT(1)/EWA(h) Feb GS

ACCESSION NR: AT5014627

UR/0000/65/000/000/0133/0137
681.142.324

16
15
B-1

AUTHOR: Bamdas, A. M.; Shapiro, S. V.; Davydova, L. N.

TITLE: Strong, static, ferromagnetic frequency dividers 25

SOURCE: Vsesoyuznoye soveshchaniye po magnitnym elementam avtomatiki i vychislitel'noy tekhniki, 9th, Yerevan, 1963, Magnitnyye analogovyye elementy (Magnetic analog elements); doklady soveshchaniya, Moscow, Izd-vo Nauka, 1965, 133-137

TOPIC TAGS: lightweight frequency divider, static frequency divider, ferromagnetic frequency divider

ABSTRACT: Studies of single-phase and three-phase ferromagnetic 50/25 c, 50/12.5 c frequency dividers and 50/75 c, 50/125 c frequency multipliers have been carried out at the research laboratory of the department of electrical machines and instrumentation of the Gor'kovskiy politekhnicheskoy institut im. A. A. Zhdanova (Gor'kiy Polytechnic Institute). Tests showed that, contrary to deductions found in the literature (A. M. Bamdas, V. A. Kulnich, S. V. Shapiro, Statisticheskiye elektromagnitnyye preobrazovateli chastoty i chisla faz, M. Gosenergoizdat, 1961), frequency halvers can be constructed with a low expenditure of active material

Card 1/2

L 55347-65

ACCESSION NR: AT5014627

exceeding by only 3-4 times the material consumption of ordinary transformers. The small weight of the newly constructed dividers points to a very correct choice of the capacitance of the excitation capacitors and of the magnetizing force of the magnetization windings. The article presents the construction, operating principles, calculative elements, and properties of a single-phase ferromagnetic frequency halver, and the (single-phase)-(three-phase) frequency halver. Orig. art. has: 10 formulas and 3 figures.

ASSOCIATION: Gor'kovskiy politekhnicheskij institut im. A. A. Zhdanova (Gor'kiy Polytechnic Institute)

SUBMITTED: 28Dec64

ENCL: 00

SUB CODE: **EC**

NO REF SOV: 004

OTHER: 000

DL
Card 2/2

L 55348-65 EWT(1)/EWA(h) Feb GS

ACCESSION NR: AT5014628

UR/0000/65/000/000/0138/0143
681.142.324

AUTHOR: Bamdas, A. M.; Shapiro, S. V.; Blinov, I. V.; Roginskaya, L. E.

TITLE: Static, ferromagnetic pulse shapers

SOURCE: Vsesoyuznoye soveshchaniye po magnitnym elementam avtomatiki i vychislitel'noy tekhniki. 9th, Yerevan, 1963. Magnitnyye analogovyye elementy (Magnetic analog elements); doklady soveshchaniya. Moscow, Izd-vo Nauka, 1965, 138-143

TOPIC TAGS: static pulse shaper, single phase input, three phase input, ferromagnetic pulse shaper

ABSTRACT: Three types of static, ferromagnetic pulse shapers (see Fig. 1 and 2 of the Enclosure) have been developed at the research laboratory of the department of electrical machines and instrumentation of the Gor'kovskiy politekhnicheskii institut (Gor'kiy Polytechnic Institute). They transform the 50 c sine voltage into unipolar 100 p/sec pulses. The article describes their design, operation, and construction in considerable detail and supplies the pertinent engineering data. Orig. art. has: 8 formulas and 5 figures.

Card 1/12

L 55348-65

ACCESSION NR: AT5014628

ASSOCIATION: Gor'kovskiy politekhnicheskii institut (Gor'kiy Polytechnic Institute)

SUBMITTED: 28Dec64

ENCL: 0.3

SUB CODE: DP, EE

NO REF SOV: 001

OTHER: 000

Card 2/5

1. 1000-4-1000(k)/1000(d)/1000(l)/1000(v) GD
 ACC NO: AF6023389 (N) SOURCE CODE: U

SOURCE CODE: UR/0000/65/000/000/0179/0182

ACC. NO. AF6023389 (N) 300000
AUTHOR: Bundak, A. M. (Gor'kiy); Zakharov, N. V. (Gor'kiy); Makhin, Yu. I. (Gor'kiy);
Shapiro, S. V. (Gor'kiy)

ORG: none

TYPE: Ferromagnetic frequency converter for automatic regulators

SOURCE: Vsesoyuznaya konferentsiya po avtomaticheskomu kontrolyu i metodam elektricheskikh izmereniy. 5th, Novosibirsk, 1963. Avtomaticheskii kontrol' i metody elektricheskikh izmereniy; trudy konferentsii. t. I: Metody elektricheskikh izmereniy. Tsi-froyde izmeritel'nyye pribory. Elementy izmeritel'nykh sistem (Automatic control and electrical measuring techniques; transactions of the conference. v. 1: Electrical mea-suring techniques. Digital measuring instruments. Elements of measuring systems). Novosibirsk, Izd-vo Nauka, 1965, 179-182

TOPIC TAGS: frequency converter, frequency doubling, frequency multiplication, power frequency multiplier

ABSTRACT: A novel frequency quadrupler for high power applications is described. This converter is more efficient than existing types because a multiplication process is utilized in which the input frequency is quadrupled directly, as well as through two-stage process with intermediate doubling. The output is the sum of the energies generated.

Card 1/3

L 10006-67

ACC NR: AT6023389

rated simultaneously by both processes. Figure 1 shows a single phase output converter (A); three phase output converter (C), essentially a combination of three single phase converters shown in (A); and a modification of the $4f$ output circuit for single phase output. Referring to part A, of figure 1, the unit consists of elements I and II. Each element has two cores, two primary windings ($W_{1(I)}$ and $W_{1(II)}$), which are compensated by three capacitors C_2 , a secondary winding W_2 , a dc bias winding W_d , and a second harmonic excitation winding W_c . The primary is supplied from a three phase line. Capacitor C_1 is used for series compensation of the output. The magnetic fluxes in all four cores have identical waveforms but are displaced with respect to each other by one quarter of the input power period. Hence, the flux fundamental components are displaced by a quarter period, the second harmonics--by a half period, and the fourth harmonics by a whole period. Consequently, in windings W_d and W_2 , the fundamental and second harmonics are cancelled, but the fourth harmonics are added, generating an output of quadrupled frequency. In the winding W_c , the fundamental and fourth harmonics are cancelled but the second harmonics are added. The current in this winding leads the second harmonic input voltage by 90° . As the result, the magnetizing force due to this current contributes to the periodic saturation of the magnetic cores and therefore, increases the $4f$ output voltage of the converter. Five experimental single phase models (0.5, 1.0, 1.2, 1.6, and 1.9 KVA) and two three phase models (3.0

Card 2/3

ACC NR: AT0023389

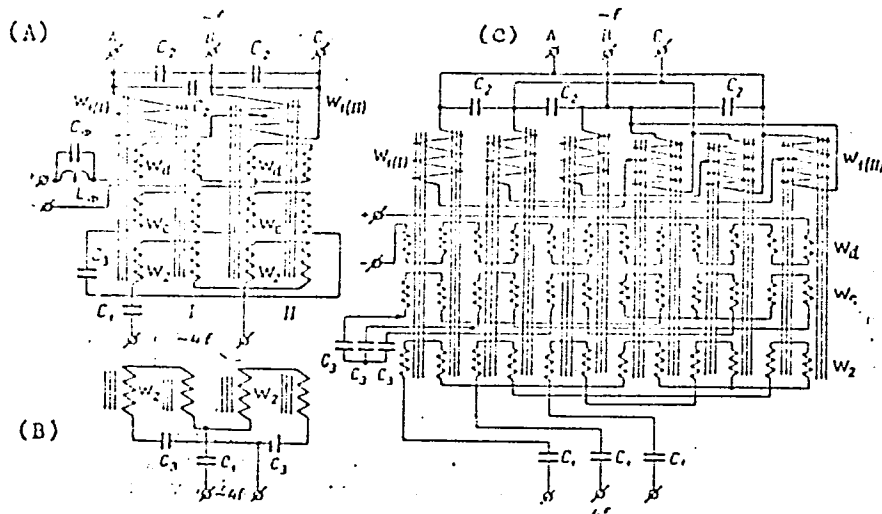


Fig. 1

and 3.6 KVA) were fabricated and tested. The efficiency was 5 to 10% higher than in conventional models and a 30-40% saving in copper and steel was possible. Orig. art. has: 3 figures.

SUB CODE: 09/

SUBM DATE: 20Sep65/

ORIG REF: 003

Card 3/3 *fy*

SHAPIRO, S.V. (Gor'kiy)

Analysis of the structure of bias controlled transformers
and autotransformers. Avtom. i telem. 26 no.5:924-931
My '65. (MIRA 18:12)

1. Submitted November 5, 1963.

ACC NR: APM000344

SOURCE CODE: UR/0144/66/000/007/0703/0766

AUTHOR: Bendas, A. M. (Doctor of Technical Sciences; Professor; Head); Shapiro, S. V. (Candidate of Technical Sciences; Docent); Gladilov, V. A. (Aspirant)

ORG: Electrical Machinery and Apparatus Department, Gor'kiy Polytechnic Institute (Kafedra elektricheskikh mashin i apparatov Gor'kovskogo politekhnicheskogo instituta)

TITLE: Ferroresonant controlled voltage and current regulators

SOURCE: IVUZ. Elektromekhanika, no. 7, 1966, 763-766

TOPIC TAGS: voltage regulator, ferromagnetic resonance, control circuit, nonlinear control system, volt ampere characteristic, excitation spectrum

ABSTRACT: The volt-ampere characteristic of the choke used in the ferroresonant controlled voltage regulator is analyzed to explain the operating principle of such regulator because that characteristic of the nonlinear element can be changed by direct current excitation. The fundamental relationships required for designing ferroresonant controlled voltage and current regulators (FRUSN and FRUST) are discussed and calculated, and it is concluded that when the magnitudes of the foregoing are known the production model choke can be calculated or selected and the types of condensers and tubes can also be selected. Orig. art. has: 5 formulas and 3 figures.

SUB CODE: 09/SUBM DATE: 24Sep65/ORIG REF: 003

Card 1/1

UDC: 621.316.726+62-501

ACC NR: AR6028422

SOURCE CODE: UR/0196/66/000/005/I034/I034

AUTHOR: Bamdas, A. M.; Shapiro, S. V.; Yemel'yanov, V. P.; Yevstigneyeva, T. A.;
Blinov, I. V.; Davydova, L. N.; Zakharov, N. V.; Makhin, Yu. I.; Roginskaya, L. E.;
Frolov, V. T.

TITLE: Development work on static frequency changers in the Gor'kiy Polytechnic
Institute im. A. A. Zhdanov

SOURCE: Ref. zh. Elektrotekhnika i energetika, Abs. 5I205

REF SOURCE: Sb. Vses. nauchno-tekhn. konferentsiya po primeneniyu vysokoskorostn.
mashin s elektroprivodom povyshen. chastoty toka v nar. kh-ve. Ordzhonikidze, 1945,
47-51

TOPIC TAGS: frequency changer, frequency converter, frequency conversion

ABSTRACT: The Laboratory has developed static ferromagnetic quadruplers, octuplers,
and nonuplers with self-magnetization by flux intermediate harmonics, with single-
and 3-phase output; also, a 1.5-ratio frequency changer has been developed. Their
principal characteristics, power and weight data are reported. Specifically, the
weight of active material varies from 36 to 29 kg/kva for capacities 1--6 kva;
efficiency, 70--80%. With an input voltage variation of 90-110%, the quadrupler
voltage varies only by ± 5 --8%. The output voltage of a negative-feedback-type
octupler varies only by ± 2 % with a load current varying from zero to 130% its

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UDC: 621.314.26

ACC NR: AR6028422

nominal value. The octupler output voltage can be regulated within $\pm 15\%$ by controlling its magnetization current. The efficiency of the 1.5-ratio frequency changer is 60--70%. It is capable of stable operation despite input voltage and load variations within $\pm 50\%$ of their nominal values. Four figures. Bibliography of 4 titles. S. Shapiro [Translation of abstract]

SUB CODE: 09

Card 2/2

ACC RM 1000000000

SUBJECT CODE: UR/0790/00/000/002, 1000, 1000

AUTHOR: Bandas, A. M.; Shapiro, S. V.; Blinov, I. V.; Yemel'yanov, V. P.; Zakharov, N. V.; Makhin, Ya. I.; Roginskaya, L. E.

TITLE: Single-stage static ferromagnetic frequency multipliers with ratios 8 and 9

SOURCE: Ref. zh. Elektrotekh. i energ, Abs. 21205

REF SOURCE: Tr. Gor'kovsk. politekh. in-ta, v. 20, no. 6, 1965, 5-11

TOPIC TAGS: frequency multiplication, frequency octupler, *ferromagnetic material*

ABSTRACT: Two single-stage static ferromagnetic frequency multipliers with a magnetic bias produced by intermediate-frequency currents are described. The frequency octupler has 8 saturated cores. Its primary windings supplied by a 3-phase system are connected in a zigzag circuit in such a way that the core fluxes form a symmetrical 8-phase system. In addition, the octupler has secondary (output) windings, and also magnetization and self-magnetization windings fed at frequencies 2 and 4 times the supply frequency. The latter windings are connected to capacitors. The 9-ratio multiplier has 9 cores. In addition to the primary, secondary, and self-magnetization windings, this multiplier has a self-magnetization winding operating at a triple-supply frequency. Characteristics of experimental models of 2-kva and 900-wa multipliers, respectively, are presented. The 2-kva octupler has an efficiency of 65%, weight, 80 kg; the 9-ratio multiplier, 70%, 40 kg. Both have a near-sinusoid output voltage wave; they have a fairly hard external characteristic: the no-load to full-load voltage regulation is 20%. Engineering design methods are given. Six figures. Bib. of

Card 1/1 9 titles. S. Shapiro

SUB CODE: 09

UDC:621.314.263.001.24

SHAPIRO, S.Ya., inzhener; SHABEL'NIK, A.V., inzhener.

Mechanical removal of ash and slag. Energetik 4 no.2:12-13 F '56.
(MLRA 9:5)

(Conveying machinery) (Ash disposal)

BELIN, F.T., inzh.; SHAPIRO, S.Ya., inzh.

Experimental study of free turbulent superheated steam
jets. Teploenergetika 11 no.5:35-38 My'64. (MIRA 17:5)

1. Ukrenergochermet.

SHAPIRO, S. Ye.

"Cases of Hemorrhagic Fever in Tadzhikistan"

Zhur. Mikrobiol. Epidemiol. i Immunobiol., No 12, 1949

W-25668

SHAPIRO, S.Ye.; TUTCHAK, S.N.; VAYSBURD, I.A.

Hemorrhagic fever. Fel'dsher & akush., Moskva no.9:28-31 Sept 1952.
(CLML 23:2)

SHAPIRO, S.Ye., dotsent, ispolnyayushchiy obyazannost' zavednyushchego; RAKHIMOV, Ya.A., chlen-korrespondent Akademii nauk Tadzhikskoy SSR, direktor; CHITAKHOVA, M.S., zasluzhennyy vrach Tadzhikskoy SSR, glavnyy vrach.

Effect of different methods of specific vaccine therapy upon the degree of sensitivity of patients affected by brucellosis to intravenous vaccination. Zhur.mikrobiol.epid.i immun. no.8:43-47 Ag '53. (MLR 6:11)

1. Klinika infektsionnykh bolezney Stalinabadskogo meditsinskogo instituta na baze Stalinabadskoy gorodskoy infektsionnoy bol'nitsy (for Shapiro).
2. Stalinabadskiy meditsinskiy institut na baze Stalinabadskoy gorodskoy infektsionnoy bol'nitsy (for Rakhimov).
3. Stalinabadskaya gorodskaya infektsionnaya bol'nitsy (for Chitakhova). (Brucellosis) (Vaccination)

SHAPIRO, S.E.

[Q fever (pneumorrhickettsiosis)] Likhoradka ky (Q) (pnevorrhickettsioz)
Stalinabad, 1954. 31 p. (MLRA 10:4)
(Q FEVER)

SHAPIRO, S.YE.

SHAPIRO, S.Ye.; MITEL'MAN, G.N.

Syntomycin therapy of typhoid fever in children. *Pediatrics* no.2:
86-87 Mr-Apr '54. (MLRA 7:6)

1. Iz Stalinabadskoy gorodskoy infektsionnoy bol'nitsy.
(CHLORAMPHENICOL) (TYPHOID FEVER)

USSR/Medicine - Plague, Leprosy, Typhoid

FD 160

Card 1/1

Author : Shapiro, S. Ye.

Title : Vyacheslav Karlovich Stefanskiy, outstanding Soviet microbiologist, epidemiologist, clinician, and specialist in infectious diseases. (On the fifth anniversary of his death)

Periodical : Zhur. mikrobiol. epid. i immun. 5, 80-83, May 1954

Abstract : A biographical sketch of Stefanskiy's life and work is given. His early work as a resident in the Odessa City Hospital with typhoid and plague, his original research on plague, rat leprosy, cholera, dysentery, and scarlet fever, his innovations in hospital procedure, and his later activities as a teacher are described. He is credited with being the first person to examine rat leprosy exhaustively, thereby providing leprologists with a laboratory model for the study of human leprosy. Two of his 60 scientific works, "Plague and its Treatment" and "Plague Barracks in Odessa," are cited as examples of his abilities. His associations with other famous Soviet scientists are mentioned.

Institution :

Submitted : November 18, 1953

SHAPIRO, S. Ye.

USSR/Medicine - Typhoid

FD-542

Card 1/1 Pub.148 - 5/23

Author : Shapiro, S. Ye. and Levinzon, E. N.

Title : The clinical characteristics of typhoid fever when treated by synthomycin

Periodical : Zhur. mikrobiol. epid. i immun. 6, 16-22, Jun. 54

Abstract : A detailed discussion of the changes produced in the pathognomonics of the clinical course of typhoid by synthomycin therapy is presented. These changes include a characteristic temperature lowering, suppression of intoxication phenomena, and prevention of complications and emaciation. In many cases, however, the remissions are only temporary and relapses occur. On the basis of these investigations, the authors conclude that synthomycin has only an ameliorating effect on the course of typhoid, and, although it reinforces the immunological reactions of the macro-organism, has no immediate bacteriostatic action. The results are presented in five graphs and a chart. No references are cited.

Institution : Stalinabad City Infectious Disease Hospital (Chief Physician M.S. Chitakhova)

Submitted : August 19, 1953

SHAPIRO, S.Ye.

Prolongation of desensitizing effect by intravenous vaccinothrapy
in brucellosis. Zhur.mikrobiol.epid.i immun. no.8:67-70 Ag '54.
(MLRA 7:9)

1. Iz Stalinabadskoy gorodskoy infektsionnoy bel'nitsy (glavnyy vrach
zasluzhennyy vrach Tadzhikskoy SSSR M.S.Chitakhova)

(BRUCELLOSIS, therapy,

vacc., prolongation of desensitizing eff. of vacc.)

(VACCINES AND VACCINATION, therapeutic use,

brucellosis, prolongation of desensitizing eff. of vacc.)

SHAPIRO, S. Ye. and LEVINSON, E. N.

"The Treatment of Infectious Diseases," a review, Zhur. Mikrobiol., Epidemiol.,
i Immunobiol., No.1, pp 114-116, 1955.

Book edited by Cor. Mbr. AMN SSSR, Prof. G. P. Rudnev.

SHAPIRO, J. Ye., LEVINSON, E. H.

Epidemiological and Clinical Peculiarities of the Central-Asiatic Variety
of Hemorrhagic Fever.

VOYENNO-MEDITSINSKIY ZHURNAL (MILITARY MEDICAL JOURNAL), No 3, 1955. *p. 55*

OSTROVSKAYA, SH.M.; SHAPIRO, S.Ye.

Some observations on Q-fever epidemics in Tajikistan. Zhur. mikro-
biol. epid. i immun. n.8:107 Ag '55 (MLRA 8:11)
(TAJIKISTAN - Q FEVER)

OSTROVSKAYA, Sh.M.; SHAPIRO, S.Ye.; LOTOTSKIY, B.V.; YASINSKIY, A.V.

Natural reservoir of Q fever and possibilities of studying it in
Tajikistan. Izv.Otd.est.nauk AN Tadzh.SSR no.11:101-107 '55.
(MLBA 9:10)

1.Tadzhikskiy institut epidemiologii, mikrobiologii i gigiyeny,
Institut zoologii i parazitologii imeni akademika Ye.N.Pavlovskogo
Akademii nauk Tadzhikskoy SSR. i Tadzhikskiy institut malyarii i
meditsinskoy parazitologii.
(TAJIKISTAN--Q FEVER)

SHAPIRO, S.Ye.,; PISARENKO, V.I.

Widal's reaction in paratyphoid fever patients treated with
levomycetin and synthomycin. Zhur. mikrobiol. epid. i immun. 27
no.2:64 F '56. (MLRA 9:5)

1. Iz Tadjhikskogo instituta epidemiologii, mikrobiologii i
gigiyeny.

(PARATYPHOID FEVER) (ANTIBIOTICS)

SHAPIRO, S. Ya. , Military Physician, Third Rank.

"Prospective Uses of Bacterial Weapons in Future Wars."

Sovetskaya Meditsina, No 22, 1938, pp 38-40.

Translation M-1334, 4 Dec 1956

SHAPIRO, S. YE.

"Analysis of Lethal Outcome in Typhoid Patients Treated With Synthomycin," S. Ye Shapiro and I. A. Vaysburd, Stalinabad City Hospital of Infectious Diseases, Zhurnal Mikrobiologii, Epidemiologii i Immunobiologii, Vol 28, No 1, Jan 57, pp 34-37

This work deals with investigation of 23 fatal cases of typhoid which had been treated with synthomycin between 1951 and 1955. Attempts were made to determine the causes of failure of antibiotic therapy. Eighteen of the cases were subjected to pathological-anatomical autopsy; the remaining cases were diagnosed before death by hemoculture or high-titer Widal reactions.

The article states that synthomycin was administered in the generally accepted dosages, i. e., a daily dose of 3 g for adults and less for children. In addition to pathogenetic and symptomatic therapy, penicillin and streptomycin were also given on the development of pneumonia. The work presents two case histories in which the administration of synthomycin was begun early and prolonged, but did not prevent death.

It is concluded on the basis of these observations that failure (fatal outcome) was determined by two factors: (1) a particularly severe course of the infection process with diffuse anatomical changes in the intestines and early affection of the central nervous and cardiovascular systems; and (2) complicating diseases, digestive collapse, helminthic diseases, and other factors which lower the immunological reactivity of the macroorganism. (U)

Sum. 1360

SHAPIRO, S.Ye.; PYATYSHINA, G.M.

Meningomyelitis during measles. Vop.okh.mat. i det. 2 no.1:77-79
Ja-F '57. (MLRA 10:2)

1. Iz Khabarovskoy gorodskoy infektsionnoy bol'nitsy (glavnyy
vrach Ye.N.Ageyeva)
(SPINAL CORD—INFLAMMATION) (MEASLES)

USSR / Pharmacology, Toxicology. Chemotherapeutic
Agents, Antibiotics. V

Abs Jour: Ref Zhur-Biol., No 18, 1958, 85231.

Author : ~~Shapiro, S. Ye.~~

Inst : Not given.

Title : The Clinical Characterization of Side Effects in
Synthomycin Therapy of Typhoid Fever and of Para-
typhoid B Fever.

Orig Pub: Zh. Mikrobiol., Epidemiol., i Immunobiol., 1957,
No 6, 112-116.

Abstract: Side effects in synthomycin therapy (50-75 mg/kg
per day) were seen within 5 to 15 days in 25% of
patients (of 210 patients with typhoid fever and
130 patients with paratyphoid B fever); these took
the form of dyspeptic disorders, skin rashes, psy-
chic disturbances, and pathological changes in the

Card 1/2

SHAPIRO, S.Ye.
MASLOV, A.V.; SHAPIRO, S.Ye.

Problems in epidemiology and parasitology at the 15th session of the
Khabarovsk Medical Institute. Zhur.mikrobiol.epid. i immun.28
no.12:143-144 D '57. (MIRA 11:4)
(COMMUNICABLE DISEASES)

USSR / Microbiology. Microbes Pathogenic to Man
and Animals. Tularemia Microbe.

F

Abs Jour : Ref. Zhur - Biol., No. 21, 1958, No. 95187
Author : Shapiro, S. Ye.; Kalmykova, A.D.; Klimenko,
O. I.; Zelenskaya, M.I.; Timofeyeva, A.A.;
Garbuzov, M. M.
Inst : -
Title : On Tularemic Diseases in the Region of
Khabarovsk.
Orig Pub : Zh. mikrobiol., epidemiol. i immunobiol.,
1958, No. 2, 21-24
Abstract : No abstract.

Card 1/1